

SOUTH AMERICA

Paraguay

GDP: **\$29.9bn**

Five-year economic growth rate: **13%**

Population: **6.8m**

Total clean energy investments, 2006-2013: **\$202m**

Installed power capacity: **9GW**

Renewable share: **N/A**

Total clean energy generation: **N/A**

Top energy authority: **Vice Ministry of Mines and Energy**

OVERALL RANKING
2014

50

OVERALL SCORE
2014

0.59



PARAMETER	RANKING	SCORE
I. Enabling Framework	47	0.67
II. Clean Energy Investment & Climate Financing	40	0.35
III. Low-Carbon Business & Clean Energy Value Chains	53	0.20
IV. Greenhouse Gas Management Activities	25	1.26

SUMMARY

Paraguay finished 50th in *Climatescope*, scoring 0.59. Among its 26 Latin American and Caribbean peers, the country ranked 22nd.

Paraguay, which is heavily reliant on large-hydro resources, was hurt by the fact that the *Climatescope* methodology only takes into account hydro resources up to 50MW in size.

A land locked country, Paraguay is spanned by two large rivers: the Paraguay and the Paraná. These waterways not only provide an exit to the Atlantic Ocean, but also represent an immense hydroelectric resource. Despite its population of just

seven million, Paraguay has 8.8GW generating capacity. By comparison, Peru has four times more citizens, but just 9% more capacity.

As a result, Paraguay exports most of the power it generates to neighbors Argentina and Brazil. Currently, non-hydro renewables generally make very little economic sense in Paraguay, given excess local hydro generation and low power prices (retail rates average \$0.07/kWh). The exception may be in the semi-arid and lower population Chaco region, which has limited access to the country's transmission network.

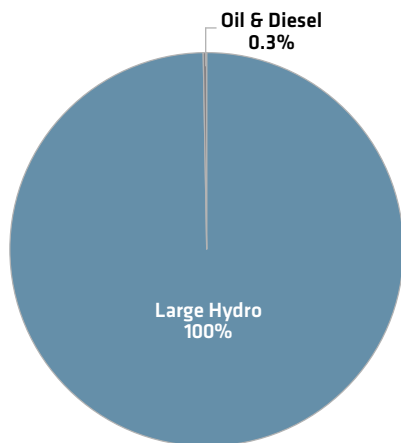
For further information, access www.global-climatescope.org/paraguay

PARAMETERS AT A GLANCE

Paraguay's electricity sector is controlled entirely by state-owned utility Administración Nacional de Electricidad (ANDE), which operates three large-hydro plants: Itaipu (7GW), Yacyreta (1.6GW) and Acaray (210MW). Itaipu and Yacyreta are co-owned and operated with Brazil and Argentina, respectively.

INSTALLED POWER CAPACITY BY SOURCE, 2013 (%)

9GW total installed capacity



Source: Bloomberg New Energy Finance, Departamento de Estudios Estadísticos (DP/DES) - Administración Nacional de Electricidad (ANDE)

Paraguayan officials have expressed interest in constructing a new 206MW hydro project to take advantage of a dam built originally for the Acaray plant. The country has no non-large hydro clean energy policy incentives or projects in place or on the horizon, given its current status as a net power exporter. In 2013, it exported 79% of the 60TWh it generated to Brazil and Argentina. Private participation in the power sector is effectively limited to the equipment, construction and operations and maintenance providers that service the existing hydro plants.

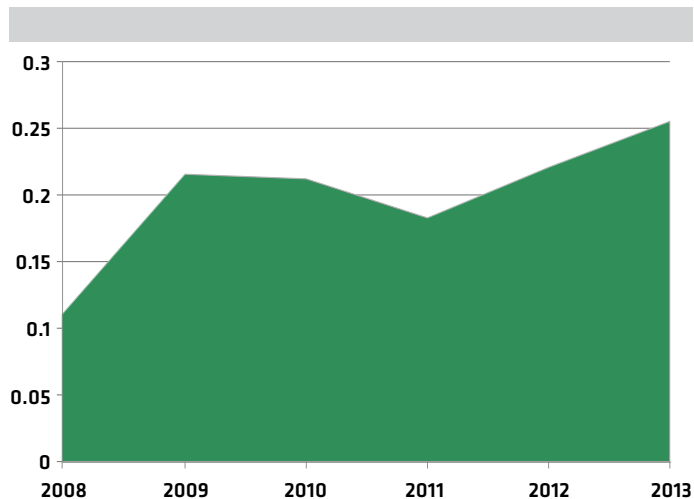
KEY POLICIES

Biofuels	Mandated 24% ethanol-gasoline blend, and 5% biodiesel blend.
-----------------	--

Source: Bloomberg New Energy Finance Policy Library

Paraguay has a domestic biofuels industry and supportive policies which have helped the sector expand locally. Biofuel production rose 16% in 2013 compared to the previous year, reaching a total capacity of 260m liters per year. Paraguay has a 25% ethanol blending mandate, the main driver of the ethanol production increase along with the country's rising gasoline consumption. Biofuels are responsible for 82% of the \$203m cumulative non-large hydro clean energy investment in Paraguay since 2006. Paraguay has biofuel producers and equipment manufacturing companies active in the country, which contribute to its *ClimateScope* value chain score.

BIOFUELS PRODUCTION, 2008-2013 (BILLION LITRES)



Source: Bloomberg New Energy Finance

Given limited opportunities for non-hydro renewables and a small clean energy market, Paraguay ranked among the bottom 15 countries in the first three parameters assessed for *ClimateScope*. It stood above the middle of the pack on Greenhouse Gas Management Activities Parameter IV with a 25th place ranking. Paraguay has three forestry offset projects active, two through the CDM mechanism. The country received a good score on the CDM failures indicator, but was helped by the way the indicator measured performance; Paraguay had no project failures relative to its small number of active projects and thus fared quite well on the indicator.